



REVIEW OF THE
MISSOURI STATE TAX COMMISSION

**From The Office Of State Auditor
Claire McCaskill**

Report No. 2000-09
February 23, 2000

AUDIT REPORT



Office Of The
State Auditor Of Missouri
Claire McCaskill

February 2000

The following problems were discovered as a result of a review conducted by our office of the Missouri State Tax Commission.

The Sales Tax Commission (STC) is required to certify the equivalent sales ratio of real property, for each county and the city of St. Louis, to the state Department of Elementary and Secondary Education (DESE) for use in determining distributions of school foundation formula funds. Although statistical consultants hired by the tax commission recommended the use of a weighted ratio in these calculations, the tax commission uses the median to determine the equivalent sales ratios.

The STC certified only three equivalent sales ratios as less than 33.3 (Carroll, Clay, and Newton). Our computations disclosed an additional forty-one counties would also have been certified as less than 33.3 if the weighted ratio had been used. The equivalent sales ratio used in the calculation of the distribution of school foundation formula funds is the higher of the most recent equivalent sales ratio or an average of the three highest of the last four years equivalent sales ratios. Because of this, while many school districts in the forty-four counties previously noted would not have received a lesser amount, the distribution of school foundation formula funds would be affected by using the weighted ratios in determining the equivalent sales ratios.

To determine the accuracy of assessed valuations in the counties, the STC performs ratio studies. The STC selects properties on the tax rolls of local jurisdictions and compares the assessed valuation of those properties to an appraised value determined by a STC appraiser. All ratio studies we reviewed contained numerous individual parcels that were assessed either higher or lower than the STC's established acceptable range, resulting in an excess or insufficient property tax liability for these parcels. As long as the study results in an acceptable median ratio, the STC does not consider these individual parcels to be a problem and does not investigate the reasons for the variance.

(over)

YELLOW SHEET

According to the Fifty-Third annual report issued by the tax commission, 1998 personal property assessed valuation was approximately \$14 billion. Of this amount, approximately \$7.4 billion of 1998 personal property assessed valuation pertained to vehicles. When assisting the assessing officers with the implementation of their assessment maintenance plans, the Technical Support Staff did not ensure that vehicles were being assessed in accordance with state law. State statutes provide that the assessor of each county, and each city not within a county, shall use the trade-in value published in the October issue of the National Automobile Dealers' Association (NADA) Official Used Car Guide, or its successor publication, as the recommended guide for determining the true value of motor vehicles.

Although the STC distributed a vehicle valuation guide in March 1999 which includes assessed valuations based upon the NADA guide trade-in values, the STC did not require the Assessors to use the guide.

REVIEW OF THE
MISSOURI STATE TAX COMMISSION

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STATE AUDITOR'S REPORT



CLAIRE C. McCASKILL
Missouri State Auditor

Honorable Mel Carnahan, Governor
and
State Tax Commission
Jefferson City, Missouri 65101

We have conducted a review of the State Tax Commission. The objectives of this review were to:

1. Review and evaluate the procedures used in the supervision of statewide equalization of real and personal property assessments.
2. Review certain internal control procedures, compliance issues, and management practices to determine the propriety, efficiency and effectiveness of those procedures and practices.

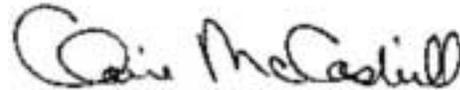
Our review was made in accordance with applicable generally accepted government auditing standards and included such procedures as we considered necessary in the circumstances. In this regard, we reviewed certain records and documents and interviewed agency personnel. Our review was generally limited to policies, practices, and transactions of the fiscal years ended June 30, 1999, 1998, and 1997.

As part of our review, we assessed the agency's management controls to the extent we determined necessary to evaluate the specific matters described above and not to provide assurance on those controls. With respect to management controls, we obtained an understanding of the design of relevant policies and procedures and whether they have been placed in operation and we assessed control risk.

Our review was limited to the specific matters described above and was based on selective tests and procedures considered appropriate in the circumstances. Had we performed additional procedures, other information might have come to our attention that would have been included in this report.

The accompanying History, Organization, and Statistical Information and Appendices are presented for informational purposes. This information was obtained from the Commission's management and was not subjected to the procedures applied in the review of the State Tax Commission.

The accompanying Management Advisory Report presents our findings and recommendations arising from our review of the State Tax Commission.



Claire McCaskill
State Auditor

August 18, 1999 (fieldwork completion date)

The following auditors participated in the preparation of this report:

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MANAGEMENT ADVISORY REPORT SECTION

Management Advisory Report -
State Auditor's Current Recommendations

REVIEW OF THE MISSOURI STATE TAX COMMISSION
SUMMARY OF FINDINGS

1. Ratio Studies (pages 7-11)

The STC is required to certify the equivalent sales ratio of real property, for each county and the city of St. Louis, to the state Department of Elementary and Secondary Education (DESE) for use in determining distributions of school foundation formula funds. Although statistical consultants hired by the STC recommended the use of a weighted ratio in these calculations, the STC uses the median to determine the equivalent sales ratios. The STC certified only three equivalent sales ratios to DESE as less than 33.3. If the weighted ratio had been used to determine the equivalent sales ratio an additional forty-one counties would have been certified as less than 33.3. All ratio studies we reviewed included numerous individual parcels that were assessed higher or lower than the statutory level of assessment which would result in an excess or insufficient tax liability.

2. Personal Property Tax Assessments (pages 11-12)

The STC has not ensured vehicles were properly assessed in accordance with state law.

SPECIAL REVIEW OF THE MISSOURI STATE TAX COMMISSION
MANAGEMENT ADVISORY REPORT-
STATE AUDITOR'S CURRENT RECOMMENDATIONS

1.

Ratio Studies

The Mission Statement of the State Tax Commission (STC) states: "The State Tax Commission shall uphold the constitution and statutes of the State of Missouri and eradicate the injustices and inequities in assessments for property tax purposes. As addressed in the STC's Fiscal Year 1999 Strategic Plan, one goal is to bring real property assessment levels, in all 115 jurisdictions in the state, to within 5% of the statutorily mandated level of assessment. To determine the accuracy of assessed valuations, the STC's Ratio Studies Section selects properties on the tax rolls of local jurisdictions and compares the assessed valuation of those properties to an appraised value determined by a STC appraiser. According to the Fifty-Third annual report issued by the STC, 1998 total assessed valuation of real property was approximately \$39 billion. Our review of the Ratio Studies Section procedures revealed the following:

- A. According to Chapter 138, RSMo Cumm. Supp. 1999, the STC is required to certify the equivalent sales ratio of real property for each county and the city of St. Louis. These certifications are made to the state Department of Elementary and Secondary Education (DESE) for use in determining distributions of school foundation formula funds. All ratios higher than thirty-one and two-thirds percent are to be certified as thirty-three and one-third percent.

Statistical consultants hired by the STC in 1977 and 1986 both recommended the STC use a **weighted ratio** for reporting a value to DESE. The 1986 consultant also reported "the **mean** or **median** of the individual sample estimates would be inappropriate to use" for reporting a value to DESE.

Weighted ratios consider the dollar value of each sample item while median ratios treat each sample item as though it had the same dollar value as all other sample items. Therefore, **median ratios** do not compare the total assessed value in a county to the total market value in a county. However, the STC has chosen to use the **median ratio** instead of the **weighted ratio** for certifying equivalent sales ratios to DESE.

Based on data from the most recent STC sales ratio studies, we recomputed the equivalent sales ratios using **weighted ratios** (as recommended by the consultant). Our computations disclosed the following counties have an equivalent sales ratio that is less than the legally mandated ratio.

<u>County</u>	<u>1998 Equivalent Sales Ratio</u>	
	<u>Certified By the STC</u>	<u>Based on Weighted Ratio</u>
Carroll	30.3	28.5
Clay	31.3	31.6
Newton	31.3	31.0
Andrew	33.3	29.3
Bates	33.3	31.0
Caldwell	33.3	31.4
Cape Girardeau	33.3	30.6
Carter	33.3	30.9
Chariton	33.3	28.8
Christian	33.3	30.7
Dade	33.3	30.8
Dunklin	33.3	29.7
Harrison	33.3	31.0
Jackson	33.3	30.5
Jasper	33.3	29.8
Jefferson	33.3	29.3
Lafayette	33.3	29.1
Lewis	33.3	31.5
Linn	33.3	30.9
Macon	33.3	28.6
Madison	33.3	31.1
Marion	33.3	30.1
Mississippi	33.3	30.9
Morgan	33.3	29.6
Nodaway	33.3	30.7
Ozark	33.3	30.6
Pemiscot	33.3	29.5
Perry	33.3	31.2
Pettis	33.3	31.3
Phelps	33.3	27.5
Pike	33.3	28.3
Platte	33.3	30.9
Polk	33.3	30.1
Ray	33.3	31.5
Ripley	33.3	31.1
Schuyler	33.3	31.1
Scott	33.3	30.6
St. Francois	33.3	27.3
Stone	33.3	31.6
Taney	33.3	29.2
Vernon	33.3	29.3
Washington	33.3	28.9
Wayne	33.3	30.5
Wright	33.3	31.2

The STC certified only three equivalent sales ratios as less than 33.3 (Carroll, Clay, and Newton). As reflected above, an additional forty-one counties would also have been certified as less than 33.3 if the weighted ratio had been used. The equivalent sales ratio used in the calculation of the distribution of school foundation formula funds is the higher of the most recent equivalent sales ratio or an average of the three highest of the last four years equivalent sales ratios. Because of this, while many school districts in the forty-four counties previously noted would not have received a lesser amount, the distribution of school foundation formula funds would be affected by using the weighted ratios in determining the equivalent sales ratios.

B. The statistical reports list each parcel included in the ratio study along with the ratio of assessed valuation determined by the local jurisdiction's assessing officer compared to the appraised market value determined by the STC's appraiser. All twenty-three ratio studies we reviewed contain numerous individual parcels that are assessed either higher or lower than the STC's established acceptable assessment level range. As long as the report indicates an acceptable median ratio, STC personnel indicated these individual parcels are not considered to be a problem and the reasons for the variances are not investigated. Examples of reports reviewed are as follows:

- 1) We observed one ratio study on residential properties where 29 out of the 35 parcels tested (83%), were not assessed within the established acceptable range of assessment of 18.05% to 19.95%. These parcels represented 79% of the total assessed valuation tested.

For one parcel included in the ratio study, the STC calculated an assessed valuation of \$4,279 less than the County Assessor's, representing an excess property tax liability of approximately 48%. Another parcel was assessed by the STC at \$5,399 more than the County Assessor's, representing an insufficient property tax liability of approximately 38.3%.

- 2) We observed one ratio study on commercial properties where 32 out of the 45 parcels tested (71%), were not assessed within the established acceptable range of assessment level of 30.40% to 33.60%. These parcels represented 69% of the total assessed valuation tested.

For one parcel included in the ratio study, the STC calculated an assessed valuation of \$28,300 less than the County Assessor's, representing an excess property tax liability of approximately 73.7%. Another parcel was assessed by the STC at \$37,000 more than the County Assessor's, representing an insufficient property tax liability of approximately 57.8%.

- 3) We observed one ratio study on agricultural properties where 30 out of the 40 items tested (75%), were not assessed within the established acceptable range of

assessment level of 11.40% to 12.60%. These parcels represented 64% of the total assessed valuation tested.

For one parcel included in the ratio study, the STC calculated an assessed valuation of \$3,053 less than the County Assessor's, representing an excess property tax liability of approximately 214%.

By not determining and correcting the cause of the parcels that are not assessed within the established acceptable range, the STC is not achieving its strategic goal, and the valuation of real property throughout the state does not appear to be equalized. Failure to ensure equalized property values results in some taxpayers paying excess taxes while others are paying insufficient taxes.

WE RECOMMEND the State Tax Commission:

- A. Use weighted ratios in calculating equivalent sales ratios.
- B. Determine the reason that numerous individual parcels fall outside the acceptable range and assist the assessors in correcting assessment methods in order to bring the assessed valuation of real properties within the STC's established acceptable ranges.

AUDITEE'S RESPONSE

- A. *The State Tax Commission acknowledges that Dr. Madsen's report dated January 15, 1986, recommends the use of the weighted ratio in reporting the ratio to the Department of Elementary and Secondary Education (DESE) for use in the School Foundation Formula. The Commission has found that the weighted mean is an invaluable statistic in measuring the uniformity between high and low valued parcels. However, the Commission and other statistical experts have concerns about the use of the weighted ratio for indirect equalization.*

The major disadvantage in using this measure is its susceptibility to sampling error. This is especially true when high valued properties are appraised at a level different from other properties in the study. In instances where a high valued property is valued significantly different, a substantially larger sample size is indicated in order to achieve an accepted level of precision. The "Standard on Ratio Studies" provided by the International Association of Assessing officers cautions that, when relying on the weighted ratio, outliers should be carefully reviewed since they can strongly affect the weighted ratio, particularly when the outliers are associated with high value properties.

The weighted ratio can also mask problems in the appraisal of low valued properties, which have a minimal effect on this statistic. The impact on the weighted ratio is proportional to the dollar value of the properties. The Commission calculates three measures of central

tendency. They include the mean, median, and weighted ratios. Of these measures, the median is the only one not prejudiced by extreme ratios or property values.

Dr. Madsen, in a supplement report dated January 28, 1986, expressed concern on what effect any errors in the estimated value weighted mean ratio had on the allocation of school funding. He asked DESE to run simulations using various value weighted ratio estimates in order to analyze the effect that any errors in the weighted ratio might have on the amount of dollars distributed. Dr. Madsen concluded that the school formula was relatively insensitive to the ratio used. Subsequent to Dr. Madsen's study, the school foundation formula has been the subject of litigation and has been dramatically altered by State Statutes. Unlike its predecessor, the school foundation formula which exists today is extremely sensitive to the ratio certified to DESE and can result in significant shifts of school funding.

The State Tax Commission respectfully recommends that the Commission contract with an outside consultant to determine the appropriate ratio to be utilized in certifying the "Equivalent Sales Ratio" to the DESE.

- B. *The State Tax Commission concurs with the State Auditor's recommendation that the Commission should enhance its communication to the assessors in analyzing the results of statistical ratio studies and to provide better documentation reflecting that communication. The State Tax Commission has never established an "acceptable" range around the median for assessment purposes. The strategic plan of the State Tax Commission is to bring the assessment level of all assessing jurisdictions to within five percent of the equivalent sales ratio as outlined in Section 138.395, RSMo Supp. 1999. The Commission, through the collective effort of the Ratio and Technical Assistance Sections, will establish meetings with assessors to analyze the results of the ratio study which reflect the assessment practices and trends in a particular county. The Technical Assistance Section will be required to document such meetings and to place that information in each county's file.*

2.

Personal Property Tax Assessments

As a means of eradicating injustices and inequities, the State Tax Commission's fiscal year 1999 Strategic Plan addresses ensuring the equitable and uniform assessments of tangible personal property.

According to the Fifty-Third annual report issued by the STC, 1998 personal property assessed valuation was approximately \$14 billion. Of this amount, approximately \$7.4 billion of 1998 personal property assessed valuation pertained to vehicles. When assisting the assessing officers with the implementation of their assessment maintenance plans, the Technical Support Staff did not ensure that vehicles were being assessed in accordance with Section 137.115.9, RSMo 1994. This section provides that the assessor of each county, and each city not within a county, shall use

the trade-in value published in the October issue of the National Automobile Dealers' Association (NADA) Official Used Car Guide, or its successor publication, as the recommended guide for determining the true value of motor vehicles. Pursuant to Section 138.410, RSMo 1994, the commission shall exercise general supervision over all the assessing officers of the state. Failure to ensure the assessment maintenance plans are being implemented in accordance with state law, could result in unequalized assessment of motor vehicles.

STC personnel indicated that for the 1998 tax year, five different guides were being used by the assessing officers to determine the true value of motor vehicles. Four of the five guides being used were developed using the NADA Official Used Car Guide, while the fifth guide being used was the actual NADA guide itself. A guide developed by the St. Louis County Assessor's Office contained 1995 - 1996 values, that were obtained from a former January publication of the NADA guide. Because the guide contained 1995 - 1996 values, the assessing officers were required to make adjustments, utilizing their judgement. Another guide, developed by the Arkansas Department of Revenue, contained assessed valuations using a twenty percent assessment rate, as opposed to the State of Missouri's rate of thirty three and one-third percent. The use of this guide required the assessing officer to adjust the assessed valuations to reflect the correct tax rate. The guides developed by St. Charles County and Jackson County Assessor's offices did not require any adjustments.

In addition, STC personnel indicated the trade-in value published in the NADA Official Used Car Guide was not always used to determine the true value of the vehicle. In one county the retail value was used while in another county the assessor determined his own values, which were much lower than those published in the NADA guide.

Although the STC distributed a vehicle valuation guide in March 1999, which includes assessed valuations computed based upon the NADA guide trade-in values, STC personnel indicated assessing officers were not required to use the guide for 1999 assessments.

By establishing written policies and procedures, that address the equalization of tangible personal property, and monitoring the implementation of such procedures the STC will ensure progress is made to eradicate the injustices and inequities in the assessment of vehicles.

WE RECOMMEND the State Tax Commission require all assessing officers to follow the vehicle valuation guide developed by the STC.

AUDITEE'S RESPONSE

The State Tax Commission concurs with the State Auditor's Office that uniformity in the valuation of vehicles is critical. The Commission has established a Property Valuation Guide which has been

distributed to all counties and the City of St. Louis for utilization in tax year 2000. Throughout the year 2000, State Tax Commission personnel will randomly sample valuations of motor vehicles to ensure compliance with statutory and constitutional provisions.

This report is intended for the information of the management of the State Tax Commission and other applicable government officials. However, this report is a matter of public record and its distribution is not limited.

STATISTICAL SECTION

History, Organization, and
Statistical Information

STATE TAX COMMISSION
HISTORY, ORGANIZATION, AND STATISTICAL INFORMATION

A. History of the State Tax Commission.

The State Tax Commission of Missouri in its current form was created by the Missouri Constitution of 1945. Article X, Section 14 of that constitution requires the General Assembly to create a tax commission for the purpose of performing three (3) functions:

- (1) Equalization of assessments as between counties;
- (2) To hear appeals from local boards of equalization in individual ~~assessment~~ cases; and
- (3) To perform such other duties as may be prescribed by law.

Prior to 1945 and the adoption of the most recent Constitution of Missouri, the function of the Commission was essentially divided between two bodies: the State Tax Commission, which was created in 1917, and essentially had authority over individual appeals in assessment cases, and supervisory authority over assessing officials, and the State Board of Equalization which performed the function of equalization of value among counties. The 1945 Constitution merged these bodies into one, creating the current constitutional and statutory entity now called the State Tax Commission of Missouri.

B. Nature and Organization of the State Tax Commission.

Pursuant to Section 138.190, RSMo 1994, the State Tax Commission is constituted of three members, chosen from the two major political parties, appointed by the Governor with the advice and consent of the Senate. The Commissioners hold staggered terms of six years. Pursuant to Section 138.240, RSMo 1994, a majority of the commissioners must concur before the Commission can make a decision on any matter before it. The members of the Commission between July 1, 1996 and June 30, 1999 were:

<u>Member</u>	<u>City</u>	<u>Term Expires</u>
Van E. Donley	Boonville, Missouri	January 23, 2000
Bruce E. Davis	Columbia, Missouri	January 23, 1998*
Douglas W. Burnett	Hartsburg, Missouri	January 23, 2002

* Although Commissioner Davis' term has expired, he continues to serve on the Commission until a successor is appointed by the Governor.

The staff of the Commission is divided into five sections:

- (1) Administration;
- (2) Legal;

- (3) Ratio Study;
- (4) Original Assessment; and
- (5) Technical Assistance.

C. Functions of the State Tax Commission

- (1) Supervision of Assessment Practices and Equalization.
- (2) Assessment Appeals in Individual Cases
- (3) Original Assessment
- (4) Ratio Study
- (5) Inter-County Equalization
- (6) Miscellaneous Functions

APPENDICES

APPENDIX A

MISSOURI STATE TAX COMMISSION
 COMPARATIVE STATEMENT OF APPROPRIATIONS AND EXPENDITURES

	1999			1998			1997		
	Appropriations	Expenditures	Lapsed Balances	Appropriations	Expenditures	Lapsed Balances	Appropriations	Expenditures	Lapsed Balances
GENERAL REVENUE FUND - STATE									
Personal Service	\$ 2,815,362	2,565,463	249,899	2,554,720	2,414,745	139,975	2,436,839	2,313,545	123,294
Expense and Equipment	688,739	633,968	54,771	586,858	574,345	12,513	552,418	550,481	1,937
State's share of the costs and expenses incurred pursuant to an approved assessment and equalization maintenance plan as provided by Chapter 137, RSMo	17,451,962	17,178,504	273,458	15,953,089	15,378,245	574,844	17,819,324	17,819,324	0
State costs for county assessor and assessor elect certification	100,800	99,450	1,350	100,800	93,600	7,200	100,800	97,650	3,150
Total General Revenue Fund - State	<u>21,056,863</u>	<u>20,477,385</u>	<u>579,478</u>	<u>19,195,467</u>	<u>18,460,935</u>	<u>734,532</u>	<u>20,909,381</u>	<u>20,781,000</u>	<u>128,381</u>
Total All Funds	<u>\$ 21,056,863</u>	<u>20,477,385</u>	<u>579,478</u>	<u>19,195,467</u>	<u>18,460,935</u>	<u>734,532</u>	<u>20,909,381</u>	<u>20,781,000</u>	<u>128,381</u>

APPENDIX B

State Tax Commission
Comparative Schedule of Expenditures

	Year Ended June 30				
	1999	1998	1997	1996	1995
Personal Services	2,565,463	2,414,745	2,313,545	2,195,728	2,025,695
Miscellaneous Programs	17,178,504	15,378,245	17,819,324	14,300,000	14,299,951
Travel and Vehicle Expense	319,755	337,233	349,404	336,957	319,263
Transportation Equipment Purchase	0	33,168			
Office Expense	75,156	70,317	57,682	58,869	60,797
Office and Communication Equipment Purchases	1,023	7,255	505	9,505	1,599
Communication Expense	55,042	49,609	30,158	35,461	32,328
Institution and Physical Plant Expense	5,634	4,208	3,956	3,810	2,186
Institution and Physical Plant Purchase	120		200		
Data Processing Expense and Equipment	132,090	20,654	25,099	64,301	49,020
Professional Services	101,510	96,321	130,692	108,674	105,186
Other Expense	43,088	49,180	50,435	33,308	31,354
Total Expenses	<u>\$20,477,385</u>	<u>\$18,460,935</u>	<u>\$20,781,000</u>	<u>\$17,146,613</u>	<u>\$16,927,379</u>